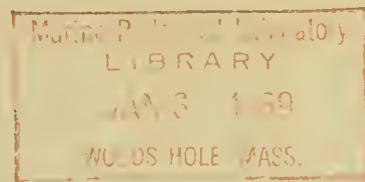


# Length Relations of Some Marine Fishes From Coastal Georgia



UNITED STATES DEPARTMENT OF THE INTERIOR  
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## Length Relations of Some Marine Fishes From Coastal Georgia

By

SHERRELL C. JORGENSEN and GRANT L. MILLER

Contribution No. 93, Bureau of Commercial Fisheries  
Biological Laboratory, Brunswick, Ga. 31520

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By

SHERRELL C. JORGENSEN AND GRANT L. MILLER, Fishery Biologists

Bureau of Commercial Fisheries Biological Laboratory  
Brunswick, Georgia 31520

## ABSTRACT

Information is given for converting standard length into fork and total lengths, fork length into standard and total lengths, and total length into standard and fork lengths of 82 species of marine fishes collected in coastal Georgia during 1953-61.

## INTRODUCTION

The Bureau of Commercial Fisheries Biological Laboratory, Brunswick, Ga., is charged with a study of the life histories of fishes of the western North Atlantic Ocean with emphasis on those off the southeastern coast of the United States. One of the laboratory's programs, a study of coastal and estuarine ecology, includes a major project on the occurrence, abundance, seasonal distribution, apparent hydrographic preferences, and early life history of fishes of coastal Georgia.

During 1953-61, young of marine fishes were collected by seining at selected localities in three types of environment in McIntosh and Glynn counties, Georgia: the upper tides-waters of the Altamaha River, the ocean beach, and the saltmarshes. The collections included larvae, juveniles, and adults of some species, but only juveniles of others.

Published information on growth and changes in body form of fishes during development generally records length as standard, fork, or total. Comparison of these data is difficult or impossible without a means of converting one measurement to another. We wanted to be able to make such comparisons in detailed studies we were planning; so we determined the relations of standard, fork, and total length by the method of least squares for those species for which we had adequate data. This report presents the statistics describing these relations for 82 marine species and gives factors for converting one length measurement to another. Length relations for fresh-water species

from the Altamaha River were not determined.

## METHODS

To determine the relation of various length measurements, we measured representative samples of all sizes of all species for standard and total lengths and (for species with forked caudal fins) fork length. Sample sizes ranged from a few specimens for some species to thousands for others.

Standard length was measured from the tip of the snout to the end of the hypural bones (the caudal base), fork length from the tip of the snout to the tip of the shortest median caudal ray, and total length from the tip of the snout to a vertical at the tip of the longest lobe, or ray, of the caudal fin. Measurements (to the nearest millimeter) were made with dial calipers or a measuring board.

We measured a size series of specimens for each seine sample of each species. Some millimeter size groups were represented by one specimen; others by many specimens. We subsampled our data to treat the species uniformly. For each millimeter size group of standard length represented in our data, we selected at random one specimen and recorded its fork and total lengths; for each millimeter size group of fork length, we selected one specimen and recorded its standard and total lengths; and for each millimeter size group of total length, we selected one specimen and recorded its standard and fork lengths. We had three sets of data for species with forked caudal fins and two sets of data for those

without forked caudals. We further refined the data by selecting only those portions of the size series in which the observations were uniformly distributed, by discarding scattered observations at either end of the size range, and by omitting those species for which fewer than five size groups were available.

Linear regressions were calculated for standard, fork, and total length relations by the method of least squares. The Biometrics Unit, Bureau of Commercial Fisheries Biological Laboratory, Seattle, Wash., provided computer services to calculate regressions for species with a sample size of 25 or more,

and we calculated the regressions for the rest of the species.

#### LENGTH RELATIONS

Three tables show the data essential to this paper. Table 1 gives the statistics describing the relations of standard, fork, and total lengths for 82 species of marine fishes from coastal Georgia. Table 2 gives the factors for converting one length to another, for the size range represented in our samples. Table 3 lists scientific and common names for all species mentioned in this report.

Table 1.--Relation of standard, fork, and total lengths in marine fishes from coastal Georgia

[ $\bar{SL}$  = standard length,  $\bar{FL}$  = fork length,  $\bar{TL}$  = total length,  $\bar{x}$  = mean of values of  $X$ ,  $\bar{y}$  = mean of values of  $Y$ ,  $N$  = number of millimeter size groups,  $b$  = change in  $Y$  for unit change in  $X$ ,  $a$  =  $Y$ -intercept of regression line, and  $Sy.x$  = standard deviation from regression (standard error of estimate)]

Species	Inde-	Depend-	Size range,		$\bar{x}$	$\bar{y}$	N	b	a	$Sy.x$
	pendent variable $X$	ent variable $Y$	independ-	ent variable $X$						
			<u>Mm.</u>	<u>Mm.</u>	<u>Mm.</u>					
<b>ANGUILLIDAE</b>										
<u>Anguilla rostrata</u>	SL TL	TL SL	45- 62 46- 63	51.83 52.91	52.91 51.83	12	0.988 1.008	1.676 -1.498	0.296 .299	
<b>ARIIDAE</b>										
<u>Galeichthys felis</u>	SL SL FL FL TL TL	FL TL SL TL SL FL	39- 93 39- 93 44- 99 44- 99 51-114 51-114	64.97 64.97 69.53 69.53 81.31 81.31	70.72 84.53 63.91 82.91 62.82 68.46	36	1.063 1.320 .930 1.228 .781 .833	1.630 -1.245 .741 -2.466 -.645 .756	.872 2.818 1.231 2.171 .902 .648	
<b>ATHERINTIDAE</b>										
<u>Membras martinica</u>	SL SL FL FL TL TL	FL TL SL TL SL FL	13- 84 13- 84 15- 92 15- 92 16- 93 16- 93	48.50 48.50 53.50 53.50 54.50 54.50	55.06 58.32 47.13 56.73 45.29 51.41	72	1.135 1.199 .874 1.061 .832 .948	.029 .154 .352 -.033 -.078 -.230	.961 1.339 .971 .965 .944 .602	
<u>Menidia menidia</u>	SL SL FL FL TL TL	FL TL SL TL SL FL	12- 95 12- 95 13-107 13-107 14-113 14-113	53.01 53.01 59.02 59.02 63.50 63.50	60.86 64.96 51.42 63.01 51.78 59.46	83	1.127 1.196 .875 1.063 .827 .934	1.112 1.534 -.247 .286 -.708 .122	.990 1.210 .940 .815 1.041 .926	
<b>BATRACHOIDIDAE</b>										
<u>Opsanus tau</u>	SL TL	TL SL	59-153 71-183	111.10 131.40	131.40 111.10	10	1.180 .846	.280 -.051	1.337 1.132	
<b>BELONIDAE</b>										
<u>Strongylura marina</u>	SL TL	TL SL	21-179 23-193	123.41 132.26	133.82 121.87	39	1.061 .934	2.878 -1.676	2.678 2.401	
<b>BLENNIIDAE</b>										
<u>Chasmodes bosquianus</u>	SL TL	TL SL	11- 71 14- 84	43.55 52.55	52.55 43.55	9	1.180 .841	1.183 -.666	2.046 1.728	
<u>Hypsoblennius hentzi</u>	SL TL	TL SL	8- 65 9- 78	37.05 45.44	45.44 37.05	18	1.227 .814	-.017 .057	.750 .611	

Table 1.--Relation of standard, fork, and total lengths in marine fishes from coastal Georgia--Continued

Species	Inde-	Depend-	Size range,	$\bar{x}$	$\bar{y}$	N	b	a	Sy.x
	pendent variable X	ent variable Y	independ- ent variable X						
<u>Mm.</u> <u>Mm.</u> <u>Mm.</u>									
<b>BOTHIDAE</b>									
<i>Etropus crossotus</i>	SL	TL	48- 71	63.77	80.44	9	1.240	1.346	.827
	TL	SL	60- 88	80.44	63.77	9	.799	-.534	.664
<i>Paralichthys dentatus</i>	SL	TL	29- 56	39.18	47.81	11	1.271	-1.992	1.577
	TL	SL	32- 69	47.81	39.18	11	.777	2.013	1.233
<i>Paralichthys lethostigma</i>	SL	TL	20- 93	45.48	57.15	33	1.257	-.005	2.469
	TL	SL	26-117	54.84	43.30	37	.800	-.563	2.134
<i>Paralichthys squamilentus</i>	SL	TL	20- 42	32.70	41.50	10	1.223	1.501	.805
	TL	SL	26- 53	41.50	32.70	10	.812	-.986	.656
<i>Scophtalmus aquosus</i>	SL	TL	47- 78	65.10	83.10	10	1.212	4.225	1.526
	TL	SL	61- 99	83.10	65.10	10	.814	-2.502	1.251
<b>CARANGIDAE</b>									
<i>Caranx hippos</i>	SL	FL	21-106	52.00	56.43	35	1.069	.838	.538
	SL	TL	21-106	52.00	64.63	35	1.247	-.195	1.699
	FL	SL	23-114	57.33	52.85	33	.935	-.756	.456
	FL	TL	23-114	57.33	65.58	33	1.166	-1.246	1.815
	TL	SL	26-132	63.61	51.25	36	.800	.394	1.351
	TL	FL	26-132	63.61	55.92	36	.857	1.404	2.291
<i>Chloroscombrus chrysurus</i>	SL	FL	15-113	56.96	63.35	78	1.087	1.417	1.017
	SL	TL	15-113	56.96	73.55	78	1.316	-1.408	1.556
	FL	SL	17-131	64.47	58.02	88	.921	-1.352	.909
	FL	TL	17-131	64.47	75.16	88	1.216	-3.204	1.156
	TL	SL	18-127	70.19	54.30	99	.754	1.412	1.005
	TL	FL	18-127	70.19	60.45	99	.822	2.764	.966
<i>Oligoplites saurus</i>	SL	FL	9-106	51.17	55.76	66	1.060	1.544	0.779
	SL	TL	9-106	51.17	61.56	66	1.181	1.143	1.030
	FL	SL	10-113	54.20	49.75	71	.942	-1.324	.731
	FL	TL	10-113	54.20	59.86	71	1.116	-.644	.621
	TL	SL	11-127	60.36	50.32	75	.846	-.767	.878
	TL	FL	11-127	60.36	54.69	75	.896	.607	.622
<i>Selene vomer</i>	SL	FL	24- 78	40.22	44.11	9	1.099	-.100	.663
	SL	TL	24- 78	40.22	53.55	9	1.338	-.260	.883
	FL	SL	27- 86	44.11	40.22	9	.909	.133	.603
	FL	TL	27- 86	44.11	53.55	9	1.216	-.070	1.381
	TL	SL	32-105	53.55	40.22	9	.746	.245	.660
	TL	FL	32-105	53.55	44.11	9	.820	.178	1.134
<i>Trachinotus carolinus</i>	SL	FL	11-102	50.63	57.49	78	1.100	1.816	.972
	SL	TL	11-102	50.63	66.74	78	1.340	-1.089	1.674
	FL	SL	13-100	52.56	46.00	78	.903	-1.461	1.015
	FL	TL	13-100	52.56	60.69	78	1.214	-3.146	1.080
	TL	SL	14-102	56.24	42.66	85	.740	1.064	.916
	TL	FL	14-102	56.24	48.87	85	.822	2.655	.829
<i>Trachinotus falcatus</i>	SL	FL	12- 59	34.78	40.02	46	1.082	2.386	.647
	SL	TL	12- 59	34.78	46.28	46	1.303	.950	.662
	FL	SL	15- 67	39.72	34.49	47	.922	-2.148	.589
	FL	TL	15- 67	39.72	45.94	47	1.214	-2.292	.858
	TL	SL	16- 79	44.78	33.70	54	.769	-.712	.650
	TL	FL	16- 79	44.78	38.81	54	.831	1.618	.606
<i>Trachinotus gleucus</i>	SL	FL	19- 60	36.93	40.80	15	1.122	1.372	.593
	SL	TL	19- 60	36.93	48.13	15	1.326	-.839	.762
	FL	SL	22- 68	42.80	36.93	15	.890	-1.171	.528
	FL	TL	22- 68	42.80	48.13	15	1.182	-2.447	.551
	TL	SL	24- 78	48.13	36.93	15	.753	.693	.574
	TL	FL	24- 78	48.13	42.80	15	.846	2.106	.466

Table 1.--Relation of standard, fork, and total lengths in marine fishes from coastal Georgia--Continued

Species	Inde-	Depend-	Size range,	$\bar{x}$	$\bar{y}$	N	b	a	Sy.x
	pendent variable X	ent variable Y	independ- ent variable X						
<u>Mm.</u> <u>Mm.</u> <u>Mm.</u>									
<b>CARANGIDAE--Continued</b>									
<i>Vomer setapinnis</i>	SL	FL	41- 60	52.40	58.20	5	1.169	-3.061	.986
	SL	TL	41- 60	52.40	68.60	5	1.410	-5.289	1.496
	FL	SL	45- 68	58.20	52.40	5	.850	2.930	.841
	FL	TL	45- 68	58.20	68.60	5	1.208	-1.682	.491
	TL	SL	53- 81	68.60	52.40	5	.702	4.229	1.056
	TL	FL	53- 81	68.60	58.20	5	.827	1.461	.406
<b>CLUPEIDAE</b>									
<i>Alosa aestivalis</i>	SL	FL	28- 58	40.00	45.00	6	1.084	1.620	.482
	SL	TL	28- 58	40.00	50.16	6	1.294	-1.612	.574
	FL	SL	32- 64	45.00	40.00	6	.921	-1.445	.444
	FL	TL	32- 64	45.00	50.16	6	1.191	-3.448	1.027
	TL	SL	35- 74	50.16	40.00	6	.772	1.292	.443
	TL	FL	35- 74	50.16	45.00	6	.836	3.051	.860
<i>Alosa sapidissima</i>	SL	FL	37- 60	50.10	54.90	10	1.110	-.726	.573
	SL	TL	37- 60	50.10	62.00	10	1.313	-3.761	.929
	FL	SL	41- 66	54.90	50.10	10	.897	.838	.515
	FL	TL	41- 66	54.90	62.00	10	1.179	-2.738	1.007
	TL	SL	45- 74	62.00	50.10	10	.756	3.197	.706
	TL	FL	45- 74	62.00	54.90	10	.841	2.758	.850
<i>Brevoortia smithi</i>	SL	FL	21- 74	46.53	50.84	38	1.050	1.992	.499
	SL	TL	21- 74	46.53	59.61	38	1.285	-.191	.901
	FL	SL	24- 85	49.44	46.23	39	.994	-2.921	1.433
	FL	TL	24- 85	49.44	59.26	39	1.283	-4.188	1.954
	TL	SL	27- 95	58.48	45.59	46	.776	.178	.596
	TL	FL	27- 95	58.48	49.83	46	.817	2.032	.656
<i>Brevoortia tyrannus</i>	SL	FL	14-148	69.12	76.36	105	1.103	.098	1.250
	SL	TL	14-148	69.12	88.45	105	1.320	-2.796	2.630
	FL	SL	16-145	76.03	68.64	117	.898	.389	1.430
	FL	TL	16-145	76.03	88.14	117	1.195	-2.712	1.588
	TL	SL	18-174	88.56	69.06	137	.751	2.531	1.602
	TL	FL	18-174	88.56	76.35	137	.834	2.480	1.456
<i>Dorosoma cepedianum</i>	SL	FL	73-117	89.14	98.71	14	1.056	4.605	1.356
	SL	TL	73-117	89.14	118.07	14	1.235	8.000	1.745
	FL	SL	81-127	98.71	89.14	14	.939	-3.568	1.279
	FL	TL	81-127	98.71	118.07	14	1.169	2.668	1.560
	TL	SL	97-150	118.07	89.14	14	.802	-5.505	1.406
	TL	FL	97-150	118.07	98.71	14	.848	-1.461	1.328
<i>Dorosoma petenense</i>	SL	FL	38- 71	52.81	58.13	22	1.078	1.180	.660
	SL	TL	38- 71	52.81	69.00	22	1.254	2.766	1.086
	FL	SL	42- 78	58.13	52.81	22	.923	-.844	.611
	FL	TL	42- 78	58.13	69.00	22	1.163	1.401	.770
	TL	SL	50- 93	69.00	52.81	22	.790	-1.700	.862
	TL	FL	50- 93	69.00	58.13	22	.856	-.927	.660
<i>Harengula pensacolae</i>	SL	FL	44- 63	54.28	59.33	21	.999	5.083	.605
	SL	TL	44- 63	54.28	68.61	21	1.280	-.863	.582
	FL	SL	49- 67	59.33	54.28	21	.988	-4.356	.602
	FL	TL	49- 67	59.33	68.61	21	1.270	-6.727	.752
	TL	SL	56- 79	68.61	54.28	21	.776	1.052	.453
	TL	FL	56- 79	68.61	59.33	21	.778	5.924	.588

Table 1.--Relation of standard, fork, and total lengths in marine fishes from coastal Georgia--Continued

Species	Inde- pend- ent vari- able able X		Depend- ent variable Y		Size range, independ- ent variable X		$\bar{x}$	$\bar{y}$	N	b	a	Sy.x
	Mm.	Mm.	Mm.	Mm.								
CLUPEIDAE--Continued												
<u>Opisthonema oglinum</u>	SL	FL	28- 71	51.87	57.33	39	1.073	1.664	0.840			
	SL	TL	28- 71	51.87	65.26	39	1.245	.665	1.427			
	FL	SL	31- 82	58.84	52.80	45	.864	1.972	1.799			
	FL	TL	31- 82	58.84	66.24	45	1.158	-1.875	2.055			
	TL	SL	35- 97	67.40	53.80	50	.735	4.265	1.505			
	TL	FL	35- 97	67.40	59.64	50	.832	3.544	1.522			
<u>Sardinella anchovia</u>	SL	FL	24- 30	27.16	30.50	6	1.099	.648	.519			
	SL	TL	24- 30	27.16	33.00	6	1.304	-2.417	.300			
	FL	SL	27- 34	30.50	27.16	6	.881	.305	.464			
	FL	TL	27- 34	30.50	33.00	6	1.164	-2.505	.386			
	TL	SL	29- 37	33.00	27.16	6	.761	2.054	.229			
	TL	FL	29- 37	33.00	30.50	6	.848	2.523	.330			
CYNOGLOSSIDAE												
<u>Syphurus plagiusa</u>	SL	TL	11-124	47.20	51.70	40	1.096	-.055	.990			
	TL	SL	13-138	51.70	47.20	40	.911	.096	.902			
CYPRINODONTIDAE												
<u>Cyprinodon variegatus</u>	SL	TL	16- 41	28.08	34.88	25	1.166	2.133	.733			
	TL	SL	21- 51	34.88	28.08	25	.851	-1.617	.626			
<u>Fundulus heteroclitus</u>	SL	TL	5- 79	39.68	49.05	66	1.196	1.580	1.167			
	TL	SL	7- 96	47.76	38.41	78	.823	-.899	1.015			
<u>Fundulus luciae</u>	SL	TL	10- 31	18.95	23.30	23	1.210	.378	.687			
	TL	SL	12- 39	23.30	18.95	23	.820	-.149	.566			
<u>Fundulus majalis</u>	SL	TL	8- 87	51.18	62.32	87	1.182	1.800	1.107			
	TL	SL	10-116	60.34	49.58	101	.844	-1.323	.962			
DIODONTIDAE												
<u>Chilomycterus schoepfi</u>	SL	TL	12- 54	28.85	35.18	27	1.187	.944	.942			
	TL	SL	15- 64	35.18	28.85	27	.839	-.673	.792			
ECHELIDAE												
<u>Myrophis punctatus</u>	SL	TL	132-170	151.00	152.10	10	1.013	-.923	.284			
	TL	SL	133-172	152.10	151.00	10	.986	.984	.250			
ELOPIDAE												
<u>Elops saurus</u>	SL	FL	23-103	59.18	63.45	22	1.056	.950	.773			
	SL	TL	23-103	59.18	74.54	22	1.294	-2.068	1.395			
	FL	SL	25-109	63.45	59.18	22	.946	-.844	.732			
	FL	TL	25-109	63.45	74.54	22	1.225	-3.192	1.476			
	TL	SL	29-131	74.54	59.18	22	.771	1.702	1.077			
	TL	FL	29-131	74.54	63.45	22	.815	2.730	1.204			

Table 1.--Relation of standard, fork, and total lengths in marine fishes from coastal Georgia--Continued

Species	Inde-	Depend-	Size range,	$\bar{x}$	$\bar{y}$	N	b	a	Sy.x
	pendent variable able X	ent variable Y	independ- ent variable X						
<u>Mm.</u> <u>Mm.</u> <u>Mm.</u>									
<b>ENGRAULIDAE</b>									
<i>Anchoa hepsetus</i>	SL	FL	13- 94	53.58	58.68	78	1.078	.932	.770
	SL	TL	13- 94	53.58	65.42	78	1.228	-.395	1.208
	FL	SL	15-104	59.50	54.40	88	.927	-.756	.648
	FL	TL	15-104	59.50	66.39	88	1.141	-1.508	.947
	TL	SL	16-117	65.76	54.09	98	.817	.390	.973
	TL	FL	16-117	65.76	59.10	98	.881	1.178	.958
<i>Anchoa lyolepis</i>	SL	FL	28- 38	31.90	35.80	10	1.077	1.453	.898
	SL	TL	28- 38	31.90	39.00	10	1.378	-4.971	.697
	FL	SL	32- 42	35.80	31.90	10	.866	.894	.805
	FL	TL	32- 42	35.80	39.00	10	1.213	-4.436	1.075
	TL	SL	34- 48	39.00	31.90	10	.707	4.343	.499
	TL	FL	34- 48	39.00	35.80	10	.773	5.641	.858
<i>Anchoa mitchilli</i>	SL	FL	10- 71	40.03	43.52	61	1.078	.389	.623
	SL	TL	10- 71	40.03	48.30	61	1.214	-.315	.940
	FL	SL	11- 76	42.56	39.20	64	.929	-.350	.600
	FL	TL	11- 76	42.56	47.20	64	1.126	-.701	.748
	TL	SL	12- 84	47.51	39.33	72	.812	.768	.766
	TL	FL	12- 84	47.51	42.75	72	.887	.586	.715
<b>EPHIPPIDAE</b>									
<i>Chaetodipterus faber</i>	SL	TL	5- 32	15.15	20.36	19	1.278	1.000	.745
	TL	SL	7- 43	20.36	15.15	19	.779	-.714	.582
<b>GERRIDAE</b>									
<i>Diapterus olisthostomus</i>	SL	FL	17- 56	28.42	32.00	7	1.115	0.312	0.744
	SL	TL	17- 56	28.42	37.85	7	1.318	.398	2.023
	FL	SL	19- 62	32.00	28.42	7	.895	-.226	.667
	FL	TL	19- 62	32.00	37.85	7	1.184	-.032	1.342
	TL	SL	23- 72	37.85	28.42	7	.752	-.039	1.528
	TL	FL	23- 72	37.85	32.00	7	.841	.157	1.131
<i>Eucinostomus gula</i>	SL	FL	10- 71	37.58	42.04	53	1.106	.462	1.002
	SL	TL	10- 71	37.58	49.02	53	1.328	-.901	.958
	FL	SL	11- 89	42.24	37.32	59	.880	.140	1.506
	FL	TL	11- 89	42.24	48.90	59	1.172	-.601	1.848
	TL	SL	12- 93	45.85	35.13	61	.751	.681	.705
	TL	FL	12- 93	45.85	39.54	61	.834	1.304	.749
<b>GOBIESOCIDAE</b>									
<i>Gobiesox strumosus</i>	SL	TL	7- 54	28.71	35.56	34	1.240	-.027	1.004
	TL	SL	9- 68	36.24	29.32	37	.801	.301	.846
<b>GOBIIDAE</b>									
<i>Gobionellus shufeldti</i>	SL	TL	13- 65	34.77	45.79	39	1.352	-1.218	1.321
	TL	SL	17- 67	41.28	31.54	39	.740	1.004	.762
<i>Gobiosoma boscii</i>	SL	TL	8- 45	28.31	34.88	32	1.230	.061	.608
	TL	SL	9- 56	32.69	26.60	35	.806	.246	.498
<b>MONACANTHIDAE</b>									
<i>Stephanolepis hispidus</i>	SL	TL	8- 53	25.78	32.72	36	1.247	.568	.661
	TL	SL	10- 50	30.87	24.18	39	.795	-.353	.569

Table 1.--Relation of standard, fork, and total lengths in marine fishes from coastal Georgia--Continued

Species	Inde- pend- ent vari- able X		Depend- ent variable Y		Size range, independ- ent variable X		$\bar{x}$	$\bar{y}$	N	b	a	Sy.x
	Mm.	Mm.	Mm.	Mm.	Mm.	Mm.						
<b>MUGILIDAE</b>												
<u><i>Mugil cephalus</i></u>	SL	FL	13-230	103.75	119.88	174	1.135	2.148	2.148	1.763		
	SL	TL	13-230	103.75	130.94	174	1.266	-.424	-.424	2.031		
	FL	SL	16-248	117.35	101.30	192	.877	-1.584	-1.584	1.732		
	FL	TL	16-248	117.35	128.07	192	1.115	-2.733	-2.733	1.634		
	TL	SL	17-219	117.21	92.88	195	.787	.646	.646	1.334		
	TL	FL	17-219	117.21	107.75	195	.900	2.233	2.233	1.090		
<u><i>Mugil curema</i></u>	SL	FL	16-125	67.66	79.38	104	1.157	1.066	1.066	.906		
	SL	TL	16-125	67.66	86.69	104	1.288	-.468	-.468	1.254		
	FL	SL	19-143	79.07	67.45	121	.860	-.542	-.542	.942		
	FL	TL	19-143	79.07	86.39	121	1.114	-1.703	-1.703	.861		
	TL	SL	20-155	86.10	67.29	133	.773	.751	.751	.925		
	TL	FL	20-155	86.10	78.74	133	.897	1.488	1.488	.731		
<b>OPHIDIIDAE</b>												
<u><i>Rissola marginata</i></u>	SL	TL	134-182	157.90	162.00	10	.973	8.411	8.411	.805		
	TL	SL	138-184	162.00	157.90	10	1.026	-.8231	-.8231	.826		
<b>POECILIIDAE</b>												
<u><i>Gambusia affinis</i></u>	SL	TL	14- 36	22.52	29.52	23	1.276	.796	.796	1.675		
	TL	SL	17- 46	29.52	22.52	23	.758	.156	.156	1.291		
<u><i>Heterandria formosa</i></u>	SL	TL	12- 19	15.80	20.20	5	.951	5.171	5.171	.612		
	TL	SL	16- 23	20.20	15.80	5	1.013	-4.661	-4.661	.631		
<u><i>Poecilia latipinna</i></u>	SL	TL	8- 42	26.92	34.19	26	1.272	-.040	-.040	.683		
	TL	SL	10- 54	36.29	28.32	31	.771	.328	.328	.868		
<b>POMACENTRIDAE</b>												
<u><i>Abudefduf saxatilis</i></u>	SL	FL	22- 31	26.25	32.37	8	1.068	4.327	4.327	.653		
	SL	TL	22- 31	26.25	35.75	8	1.288	1.948	1.948	.612		
	FL	SL	27- 37	32.37	26.25	8	.907	-3.103	-3.103	.601		
	FL	TL	27- 37	32.37	35.75	8	1.182	-2.498	-2.498	.728		
	TL	SL	30- 42	35.75	26.25	8	.762	-.981	-.981	.470		
	TL	FL	30- 42	35.75	32.37	8	.823	2.934	2.934	.608		
<b>POMADASYIDAE</b>												
<u><i>Orthopristis chrysopterus</i></u>	SL	FL	11- 46	29.42	35.10	31	1.169	.695	.695	.970		
	SL	TL	11- 46	29.42	37.74	31	1.326	-.268	-.268	.518		
	FL	SL	13- 55	34.89	29.33	36	.852	-.407	-.407	.737		
	FL	TL	13- 55	34.89	37.50	36	1.123	-1.682	-1.682	1.195		
	TL	SL	14- 59	37.77	29.49	39	.751	1.121	1.121	.425		
	TL	FL	14- 59	37.77	35.26	39	.892	1.587	1.587	1.017		
<b>POMATOMIDAE</b>												
<u><i>Pomatomus saltatrix</i></u>	SL	FL	28-108	62.82	71.26	34	1.113	1.324	1.324	1.822		
	SL	TL	28-108	62.82	78.53	34	1.272	-.398	-.398	1.562		
	FL	SL	32-106	67.52	59.55	29	.910	-.881	-.881	1.652		
	FL	TL	32-106	67.52	74.38	29	1.135	-2.230	-2.230	2.194		
	TL	SL	35-103	68.46	54.93	28	.804	-.119	-.119	1.067		
	TL	FL	35-103	68.46	62.61	28	.906	.583	.583	.914		

Table 1.--Relation of standard, fork, and total lengths in marine fishes from coastal Georgia--Continued

Species	Inde-	Depend-	Size range,	$\bar{x}$	$\bar{y}$	N	b	a	Sy.x
	pendent variable X	ent variable Y	independ- ent variable X						
				<u>Mm.</u>	<u>Mm.</u>	<u>Mm.</u>			
<b>SCIACENIDAE</b>									
<u>Bairdiella chrysura</u>	SL	TL	12-151	74.48	92.97	104	1.219	2.182	1.146
	TL	SL	15-165	84.62	67.67	112	.815	-1.270	.937
<u>Cynoscion nebulosus</u>	SL	TL	8- 60	26.45	33.40	20	1.224	1.020	.867
	TL	SL	10- 72	33.40	26.45	20	.815	-.764	.707
<u>Cynoscion regalis</u>	SL	TL	8- 50	28.93	37.38	29	1.290	.070	.756
	TL	SL	10- 52	33.55	25.86	29	.763	.266	.714
<u>Larimus fasciatus</u>	SL	TL	16- 48	31.44	42.37	27	1.336	.362	1.079
	TL	SL	22- 65	42.55	31.52	29	.751	-.446	.702
<u>Leiostomus xanthurus</u>	SL	TL	12-105	48.35	61.65	71	1.288	-.606	.910
	TL	SL	14-111	57.70	45.24	87	.771	.760	.893
<u>Menticirrhus americanus</u>	SL	TL	7-107	54.02	68.65	94	1.252	1.028	.968
	TL	SL	8-127	65.51	51.49	111	.797	-.726	.827
<u>Menticirrhus littoralis</u>	SL	TL	7-122	59.21	73.41	102	1.216	1.393	1.062
	TL	SL	9-148	70.03	56.32	119	.819	-1.006	.781
<u>Menticirrhus saxatilis</u>	SL	TL	11- 63	30.50	38.72	36	1.233	1.116	.679
	TL	SL	13- 56	33.62	26.38	39	.814	-.990	.537
<u>Micropogon undulatus</u>	SL	TL	7- 38	17.00	22.00	16	1.369	-1.270	.810
	TL	SL	8- 52	22.00	17.00	16	.728	.995	.590
<u>Pogonias cromis</u>	SL	TL	19- 67	33.85	43.42	7	1.316	-1.133	.392
	TL	SL	24- 87	43.42	33.85	7	.759	.877	.297
<u>Sciaenops ocellata</u>	SL	TL	13- 32	21.60	27.40	5	1.247	.469	.664
	TL	SL	16- 40	27.40	21.60	5	.799	-.290	.532
<u>Stellifer lanceolatus</u>	SL	TL	17- 93	54.22	71.51	27	1.295	1.295	1.298
	TL	SL	22-123	71.51	54.22	27	.770	-.864	1.001
<b>SCOMBRIDAE</b>									
<u>Scomberomorus maculatus</u>	SL	FL	15-108	57.71	64.00	35	1.102	.387	1.487
	SL	TL	15-108	57.71	72.23	35	1.269	-1.026	2.679
	FL	SL	17-103	53.59	48.47	32	.918	-.730	.761
	FL	TL	17-103	53.59	60.50	32	1.173	-2.349	2.506
	TL	SL	18-104	55.80	45.17	30	.812	-.149	.643
	TL	FL	18-104	55.80	50.07	30	.883	.771	.881
<b>SOLEIDAE</b>									
<u>Trinectes maculatus</u>	SL	TL	9- 50	27.82	36.42	38	1.277	.906	1.184
	TL	SL	11- 64	34.73	26.31	48	.764	-.209	.661
<b>SPARIDAE</b>									
<u>Archosargus probatocephalus</u>	SL	FL	11- 15	13.00	15.20	5	1.200	-.400	.365
	SL	TL	11- 15	13.00	16.20	5	1.200	.600	.365
	FL	SL	13- 18	15.20	13.00	5	.811	.676	.300
	FL	TL	13- 18	15.20	16.20	5	1.000	1.000	.000
	TL	SL	14- 19	16.20	13.00	5	.811	-.135	.300
	TL	FL	14- 19	16.20	15.20	5	1.000	-1.000	.000

Table 1.--Relation of standard, fork, and total lengths in marine fishes from coastal Georgia--Continued

Species	Inde- pend- ent vari- able able X		Depend- ent variable Y		Size range, independ- ent variable X		$\bar{x}$	$\bar{y}$	N	b	a	Sy.x
	Mm.	Mm.	Mm.	Mm.								
SPARIDAE--Continued												
<u>Lagodon rhomboides</u>	SL	FL	14-119	66.33	77.33	15	1.138	1.873				.929
	SL	TL	14-119	66.33	84.86	15	1.282	-.155				1.670
	FL	SL	16-136	77.33	66.33	15	.878	-1.597				.816
	FL	TL	16-136	77.33	84.86	15	1.126	-2.252				1.407
	TL	SL	18-152	84.86	66.33	15	.779	.241				1.301
	TL	FL	18-152	84.86	77.33	15	.886	2.102				1.248
STROMATEIDAE												
<u>Peprilus alepidotus</u>	SL	FL	47-102	74.56	83.95	23	1.063	4.693				.777
	SL	TL	47-102	73.32	101.25	28	1.450	-5.057				1.320
	FL	SL	54-114	83.95	74.56	23	.939	-4.235				.730
	FL	TL	54-114	82.57	101.25	28	1.353	-10.442				1.132
	TL	SL	62-145	101.25	73.32	28	.687	3.751				.908
	TL	FL	62-145	101.25	82.57	28	.737	7.918				.836
SYNGNATHIDAE												
<u>Syngnathus fuscus</u>	SL	TL	33-101	69.10	72.03	30	1.025	1.175				.404
	TL	SL	35-105	72.03	69.10	30	.975	-1.100				.394
<u>Syngnathus louisianae</u>	SL	TL	39- 81	55.79	58.29	24	1.039	.313				.461
	TL	SL	41- 84	58.29	55.79	24	.961	-2.221				.443
SYNODONTIDAE												
<u>Synodus foetens</u>	SL	FL	32- 44	36.07	38.30	13	1.093	-1.121				.794
	SL	TL	32- 44	36.07	41.23	13	1.188	-1.610				.436
	FL	SL	33- 46	38.30	36.07	13	.883	2.263				.713
	FL	TL	33- 46	38.30	41.23	13	1.052	.927				.873
	TL	SL	35- 50	41.23	36.07	13	.834	1.680				.366
	TL	FL	35- 50	41.23	38.30	13	.915	.575				.814
TETRAODONTIDAE												
<u>Sphaeroides maculatus</u>	SL	TL	9- 37	20.17	26.71	28	1.240	1.699				.619
	TL	SL	12- 47	26.71	20.17	28	.802	-1.265				.498
TRICLIDAE												
<u>Prionotus carolinus</u>	SL	TL	35- 73	51.50	65.64	14	1.339	-3.339				.820
	TL	SL	44- 94	65.64	51.50	14	.744	2.690				.611
<u>Prionotus scitulus</u>	SL	TL	17- 61	37.21	46.30	13	1.248	-.119				1.084
	TL	SL	22- 78	46.30	37.21	13	.798	.258				.867
<u>Prionotus tribulus</u>	SL	TL	10- 64	39.44	50.00	9	1.264	.132				.710
	TL	SL	13- 81	50.00	39.44	9	.790	-.060				.560
URANOSCOPIDAE												
<u>Astroscopus y-graecum</u>	SL	TL	11- 98	41.75	55.29	51	1.264	2.514				1.220
	TL	SL	16- 96	52.86	39.64	56	.775	-1.329				.946

Table 2.--Conversion factors for standard, fork, and total lengths (millimeters) for 82 species of marine fishes occurring in coastal Georgia

[Six factors are given for species with forked caudal fins, two are given for species without forked caudal fins]

Species	Size range Total length	Standard length to:		Fork length to:		Total length to:	
		Fork length	Total length	Standard length	Total length	Standard length	Fork length
	Mm.						
ANGUILLIDAE							
<i>Anguilla rostrata</i>	46- 63		1.676 + 0.988SL			-1.498 + 1.008TL	
ARIIDAE							
<i>Galeichthys felis</i>	51-114	1.630 + 1.063SL	-1.245 + 1.320SL	-0.741 + 0.930FL	-2.466 + 1.228FL	-.645 + .781TL	0.756 + 0.833TL
ATHERINIDAE							
<i>Menidia martinica</i>	16- 93	.029 + 1.135SL	.154 + 1.199SL	.352 + .874FL	-.033 + 1.061FL	-.078 + .832TL	-.230 + .948TL
<i>Menidia menidia</i>	14-113	1.112 + 1.127SL	1.534 + 1.196SL	-.247 + .875FL	.286 + 1.063FL	-.708 + .827TL	.122 + .934TL
BATRACHOIDIDAE							
<i>Opsanus tau</i>	71-183		.280 + 1.180SL			-.051 + .846TL	
BELONIDAE							
<i>Strongylura marina</i>	23-193		2.878 + 1.061SL			-1.676 + .934TL	
BLENNIIDAE							
<i>Chasmodes bosquianus</i>	14- 84		1.183 + 1.180SL			-.666 + .841TL	
<i>Hypsoblennius hentzi</i>	9- 78		-.017 + 1.227SL			-.057 + .814TL	
BOTHIDAE							
<i>Etrupos crossotus</i>	60- 88		1.346 + 1.240SL			-.534 + .799TL	
<i>Paralichthys dentatus</i>	32- 69		1.992 + 1.271SL			2.013 + .777TL	
<i>Paralichthys lethostigma</i>	26-117		-.005 + 1.257SL			-.563 + .800TL	
<i>Paralichthys squamiflentus</i>	26- 53		1.501 + 1.223SL			-.986 + .812TL	
<i>Scopthalmus aquosus</i>	61- 99		4.225 + 1.212SL			-2.502 + .814TL	
CARANGIDAE							
<i>Caranx hippos</i>	26-132	.838 + 1.069SL	-.195 + 1.247SL	-.756 + .935FL	-1.246 + 1.166FL	.394 + .800TL	1.404 + .857TL
<i>Chloroscombrus chrysurus</i>	18-127	1.417 + 1.087SL	-1.408 + 1.316SL	-1.352 + .921FL	-3.204 + 1.216FL	1.412 + .754TL	2.764 + .822TL
<i>Oligoplites saurus</i>	11-127	1.544 + 1.060SL	1.143 + 1.181SL	-.1324 + .942FL	-.644 + 1.116FL	-.767 + .846TL	.607 + .896TL
<i>Selene vomer</i>	32-105	-.100 + 1.099SL	-.260 + 1.338SL	.133 + .909FL	-.070 + 1.216FL	.245 + .746TL	.178 + .820TL
<i>Trachinotus carolinus</i>	14-102	1.186 + 1.106SL	-1.089 + 1.340SL	-.1461 + .903FL	-3.146 + 1.214FL	1.064 + .740TL	2.655 + .822TL
<i>Trachinotus falcatus</i>	16- 79	2.386 + 1.082SL	.950 + 1.303SL	-2.148 + .922FL	-2.292 + 1.214FL	-.712 + .769TL	1.618 + .831TL
<i>Trachinotus glaucus</i>	24- 78	1.372 + 1.122SL	-.839 + 1.326SL	-.171 + .890FL	-2.447 + 1.182FL	.693 + .753TL	2.106 + .846TL
<i>Vomer setapinnis</i>	53- 81	-3.061 + 1.169SL	-5.289 + 1.410SL	2.930 + .850FL	-1.682 + 1.208FL	4.229 + .702TL	1.461 + .827TL
CLUPEIDAE							
<i>Alosa aestivalis</i>	35- 74	1.620 + 1.084SL	-1.612 + 1.294SL	-1.445 + .921FL	-3.448 + 1.191FL	1.292 + .772TL	3.051 + .836TL
<i>Alosa sapidissima</i>	45- 74	-.726 + 1.110SL	-3.761 + 1.313SL	.838 + .897FL	-2.738 + 1.179FL	3.197 + .756TL	2.758 + .841TL
<i>Brevoortia smithi</i>	27- 95	1.992 + 1.050SL	-.191 + 1.285SL	-2.921 + .994FL	-4.188 + 1.283FL	.178 + .776TL	2.032 + .817TL
<i>Brevoortia tyrannus</i>	18-174	.098 + 1.103SL	-2.796 + 1.320SL	.389 + .898FL	-2.712 + 1.195FL	2.531 + .751TL	2.480 + .834TL
<i>Dorosoma cepedianum</i>	97-150	4.605 + 1.056SL	8.000 + 1.235SL	-3.568 + .939FL	2.668 + 1.169FL	-5.505 + .802TL	-1.461 + .848TL
<i>Dorosoma petenense</i>	50- 93	1.180 + 1.078SL	2.766 + 1.254SL	-.844 + .963FL	1.401 + 1.163FL	-1.700 + .790TL	-.927 + .856TL
<i>Harengula pensacolae</i>	56- 79	5.083 + .999SL	-.863 + 1.280SL	-4.356 + .988FL	-6.727 + 1.270FL	1.052 + .776TL	5.924 + .778TL
<i>Opisthonema oglinum</i>	35- 97	1.664 + 1.073SL	.665 + 1.245SL	1.972 + .864FL	-1.875 + 1.158FL	4.265 + .735TL	3.544 + .832TL
<i>Sardinella anchovia</i>	29- 37	.648 + 1.099SL	-2.417 + 1.304SL	.305 + .881FL	-2.505 + 1.164FL	2.054 + .761TL	2.523 + .848TL
CYNOGLOSSIDAE							
<i>Sympnphorus plagiusa</i>	13-138		-.055 + 1.096SL			.096 + .911TL	
CYPRINODONTIDAE							
<i>Cyprinodon variegatus</i>	21- 51		2.133 + 1.166SL			-.617 + .851TL	
<i>Fundulus heteroclitus</i>	7- 96		1.580 + 1.196SL			-.899 + .823TL	
<i>Fundulus luciae</i>	12- 39		.378 + 1.210SL			-.149 + .820TL	
<i>Fundulus majalis</i>	10-116		1.800 + 1.182SL			-.1323 + .844TL	
DIODONTIDAE							
<i>Chilomycterus schoepfii</i>	15- 64		.944 + 1.187SL			-.673 + .839TL	
ECHELIDAE							
<i>Myrophis punctatus</i>	133-172		-.923 + 1.013SL			.984 + .986TL	

Table 2--Conversion factors for standard, fork, and total lengths (millimeters) for 82 species of marine fishes occurring in coastal Georgia--Continued

Species	Size range Total length	Standard length to:		Fork length to:		Total length to:	
		Fork length	Total length	Standard length	Total length	Standard length	Fork length
	Mm.						
ELOPIDAE							
<u>Elops saurus</u>	29-131	0.950 + 1.056SL	-2.068 + 1.294SL	-0.844 + 0.946FL	-3.192 + 1.225FL	1.702 + 0.771TL	2.730 + 0.815TL
ENGRAULIDAE							
<u>Anchoa hepsetus</u>	16-117	.932 + 1.078SL	-.395 + 1.228SL	-.756 + .927FL	-1.508 + 1.141FL	.390 + .817TL	1.178 + .881TL
<u>Anchoa lyolepis</u>	34- 48	1.453 + 1.077SL	-.971 + 1.378SL	.894 + .866FL	-4.436 + 1.213FL	4.343 + .707TL	5.641 + .773TL
<u>Anchoa mitchilli</u>	12- 34	.389 + 1.078SL	-.315 + 1.214SL	-.350 + .929FL	-.701 + 1.126FL	.768 + .812TL	.586 + .887TL
EPHIPPIDAE							
<u>Chaetodipterus faber</u>	7- 43		1.000 + 1.278SL			-.714 + .779TL	
GERRIDAE							
<u>Diapterus olithostomus</u>	23- 72	.312 + 1.115SL	.398 + 1.318SL	-.226 + .895FL	-.032 + 1.184FL	-.039 + .752TL	.157 + .841TL
<u>Eucinostomus gula</u>	12- 93	.462 + 1.106SL	-.901 + 1.328SL	.140 + .880FL	-.601 + 1.172FL	.681 + .751TL	1.304 + .834TL
GOBIESOCIDAE							
<u>Gobiesox strumosus</u>	9- 68		-.027 + 1.240SL			.301 + .801TL	
GOBIIDAE							
<u>Gobionellus shufeldti</u>	17- 67		-.218 + 1.352SL			1.004 + .740TL	
<u>Gobiosoma hoscii</u>	9- 56		.061 + 1.230SL			.246 + .806TL	
MONACANTHIDAE							
<u>Stephanolepis hispidus</u>	10- 50		.568 + 1.247SL			-.353 + .795TL	
MUGILIDAE							
<u>Mugil cephalus</u>	17-219	2.148 + 1.135SL	-.424 + 1.266SL	-.584 + .877FL	-2.733 + 1.115FL	.646 + .787TL	2.233 + .900TL
<u>Mugil curema</u>	20-155	1.066 + 1.157SL	-.468 + 1.288SL	-.542 + .860FL	-1.703 + 1.114FL	.751 + .773TL	1.488 + .897TL
OPHIDIIDAE							
<u>Rissoa marginata</u>	138-184		8.411 + .973SL			-.231 + 1.026TL	
POECILIIDAE							
<u>Gamhusia affinis</u>	17- 46		.796 + 1.276SL			-.156 + .758TL	
<u>Heterandria formosa</u>	16- 23		5.171 + .951SL			-.461 + 1.013TL	
<u>Poecilia latipinna</u>	10- 54		-.040 + 1.272SL			.328 + .771TL	
POMACENTRIDAE							
<u>Abudefduf saxatilis</u>	30- 42	4.327 + 1.068SL	1.948 + 1.288SL	-.3.103 + .907FL	-2.498 + 1.182FL	-.981 + .762TL	2.934 + .823TL
POMADASYIDAE							
<u>Orthopristis chrysoptera</u>	14- 59	.695 + 1.169SL	-.268 + 1.326SL	-.407 + .852FL	-1.682 + 1.123FL	1.121 + .751TL	1.587 + .892TL
POMATOMIDAE							
<u>Pomatostomus saltatrix</u>	35-103	1.324 + 1.113SL	-.1.398 + 1.272SL	-.881 + .910FL	-2.230 + 1.135FL	-.119 + .804TL	.583 + .906TL
SCIAENIDAE							
<u>Bairdiella chrysura</u>	15-165		2.182 + 1.219SL			-.270 + .815TL	
<u>Cynoscion nebulosus</u>	10- 72		1.020 + 1.224SL			-.764 + .815TL	
<u>Cynoscion regalis</u>	10- 52		.070 + 1.290SL			.266 + .763TL	
<u>Larimus fasciatus</u>	22- 65		.362 + 1.336SL			-.446 + .751TL	
<u>Leiostomus xanthurus</u>	14-111		-.606 + 1.288SL			.760 + .771TL	
<u>Menticirrhus americanus</u>	8-127		1.028 + 1.252SL			-.726 + .797TL	
<u>Menticirrhus littoralis</u>	9-148		1.393 + 1.216SL			-.006 + .819TL	
<u>Menticirrhus saxatilis</u>	13- 56		1.116 + 1.233SL			-.990 + .814TL	
<u>Micropogon undulatus</u>	8- 32		-.270 + 1.369SL			.995 + .728TL	
<u>Pogonias cromis</u>	24- 87		-.133 + 1.316SL			.877 + .759TL	
<u>Sciaenops ocellatus</u>	16- 40		.469 + 1.247SL			-.290 + .799TL	
<u>Stellifer lanceolatus</u>	22-123		1.295 + 1.295SL			-.864 + .770TL	

Table 2.--Conversion factors for standard, fork, and total lengths (millimeters) for 82 species of marine fishes occurring in coastal Georgia--Continued

Species	Size range Total length	Standard length to:		Fork length to:		Total length to:	
		Fork length	Total length	Standard length	Total length	Standard length	Fork length
	Mm.						
SCOMBRIDAE							
<u>Scomberomorus maculatus</u>	18-104	0.387 + 1.102SL	-1.026 + 1.269SL	-0.730 + .918FL	-2.349 + 1.173FL	-0.149 + .812TL	0.771 + .883TL
SOLEIDAE							
<u>Trinectes maculatus</u>	11- 64		.906 + 1.277SL			.209 + .764TL	
SPARIDAE							
<u>Archosargus probatocephalus</u>	14- 19	-.400 + 1.200SL	.600 + 1.200SL	.676 + .811FL	1.000 + 1.000FL	.135 + .811TL	-1.000 + 1.000TL
<u>Lagodon rhomboides</u>	18-152	1.873 + 1.138SL	-.155 + 1.282SL	-1.597 + .878FL	-2.252 + 1.126FL	.241 + .779TL	2.102 + .886TL
STROMATEIDAE							
<u>Peprilus alepidotus</u>	62-145	4.693 + 1.063SL	-5.057 + 1.450SL	-4.235 + .939FL	-10.442 + 1.353FL	3.751 + .687TL	7.918 + .737TL
SYNGNATHIDAE							
<u>Syngnathus fuscus</u>	35-105		1.175 + 1.025SL				
<u>Syngnathus louisianae</u>	41- 84		.313 + 1.039SL			.1100 + .975TL	
						.221 + .961TL	
SYNODONTIDAE							
<u>Synodus foetens</u>	35- 50	-1.121 + 1.093SL	-1.610 + 1.188SL	2.263 + .883FL	.927 + 1.052FL	1.680 + .834TL	.575 + .915TL
TETRAODONTIDAE							
<u>Sphaeroides maculatus</u>	12- 47		1.699 + 1.240SL				
						-1.265 + .802TL	
TRIGLIDAE							
<u>Prionotus carolinus</u>	44- 94						
<u>Prionotus scitulus</u>	22- 78		-3.339 + 1.339SL			2.690 + .744TL	
<u>Prionotus tribulus</u>	13- 81		-.119 + 1.248SL			.258 + .798TL	
			.132 + 1.264SL			-.060 + .790TL	
URANOSCOPIIDAE							
<u>Astroscopus y-gracum</u>	16- 96		2.514 + 1.264SL				
						-1.329 + .775TL	

Table 3.--List of scientific and common names of fishes

[Common name is from American Fisheries Society Special Publication 2(1960)<sup>1</sup> - a second common name has been added where the AFS name may confuse species locally]

<u>Family</u>	<u>Species</u>	<u>Common name</u>
ANGUILLIDAE	<u>Anguilla rostrata</u> (LeSueur)	American eel
ARIIDAE	<u>Galeichthys felis</u> (Linnaeus)	Sea catfish
ATHERINIDAE	<u>Membras martinica</u> (Valenciennes) <u>Menidia menidia</u> (Linnaeus)	Rough silverside Atlantic silverside
BATRACHOIDIDAE	<u>Opsanus tau</u> (Linnaeus)	Oyster toadfish
BELONIDAE	<u>Strongylura marina</u> (Walbaum)	Atlantic needlefish
BLENNIIDAE	<u>Chasmodes bosquianus</u> (Lacépède) <u>Hypsoblennius hentzi</u> (LeSueur)	Striped blenny Feather blenny
BOTHIDAE	<u>Etropus crossotus</u> Jordan and Gilbert <u>Paralichthys dentatus</u> (Linnaeus) <u>Paralichthys lethostigma</u> Jordan and Gilbert <u>Paralichthys squamilentus</u> Jordan and Gilbert <u>Scophthalmus aquosus</u> (Mitchill)	Fringed flounder Summer flounder Southern flounder Broad flounder Windowpane
CARANGIDAE	<u>Caranx hippos</u> (Linnaeus) <u>Chloroscombrus chrysurus</u> (Linnaeus) <u>Oligoplites saurus</u> (Bloch and Schneider) <u>Selene vomer</u> (Linnaeus) <u>Trachinotus carolinus</u> (Linnaeus) <u>Trachinotus falcatus</u> (Linnaeus) <u>Trachinotus glaucus</u> (Bloch) <u>Vomer setapinnis</u> (Mitchill)	Crevalle jack Bumper Leatherjacket Lookdown Pompano Permit Palometa Atlantic moonfish
CLUPEIDAE	<u>Alosa aestivalis</u> (Mitchill) <u>Alosa sapidissima</u> (Wilson) <u>Brevoortia smithi</u> Hildebrand <u>Brevoortia tyrannus</u> (Latrobe) <u>Dorosoma cepedianum</u> (LeSueur) <u>Dorosoma petenense</u> (Günther) <u>Harengula pensacolae</u> Goode and Bean <u>Opisthonema oglinum</u> (LeSueur) <u>Sardinella anchovia</u> Valenciennes	Blue back herring American shad Yellowfin shad Atlantic menhaden Gizzard shad Threadfin shad Scaled sardine Atlantic thread herring Spanish sardine

<sup>1</sup> A list of common and scientific names of fishes from the United States and Canada, by Reeve M. Bailey, et al. 1960. Amer. Fish. Soc. Spec. Publ. No. 2 (2nd ed.), 102 p.

Table 3.--List of scientific and common names of fishes--Continued

<u>Family</u>	<u>Species</u>	<u>Common name</u>
CYNOGLOSSIDAE	<u>Syphurus</u> <u>plagiusa</u> (Linnaeus)	Blackcheek tonguefish
CYPRINODONTIDAE	<u>Cyprinodon</u> <u>variegatus</u> Lacépède <u>Fundulus</u> <u>heteroclitus</u> (Linnaeus) <u>Fundulus</u> <u>luciae</u> (Baird) <u>Fundulus</u> <u>majalis</u> (Walbaum)	Sheepshead minnow Mummichog Spotfin killifish Striped killifish
DIODONTIDAE	<u>Chilomycterus</u> <u>schoepfii</u> (Walbaum)	Striped burrfish
ECHELIDAE	<u>Myrophis</u> <u>punctatus</u> Lutken	Speckled worm eel
ELOPIDAE	<u>Elops</u> <u>saurus</u> Linnaeus	Ladyfish
ENGRAULIDAE	<u>Anchoa</u> <u>hepsetus</u> (Linnaeus) <u>Anchoa</u> <u>lyolepis</u> (Evermann and Marsh) <u>Anchoa</u> <u>mitchilli</u> (Valenciennes)	Striped anchovy Dusky anchovy Bay anchovy
EPHIPPIDAE	<u>Chaetodipterus</u> <u>faber</u> (Broussonet)	Atlantic spadefish
GERRIDAE	<u>Diapterus</u> <u>olisthostomus</u> (Goode and Bean) <u>Eucinostomus</u> <u>gula</u> (Quoy and Gaimard)	Irish pompano; mojarra Silver jenny; mojarra
GOBIESOCIDAE	<u>Gobiesox</u> <u>strumosus</u> Cope	Skilletfish
GOBIIDAE	<u>Gobionellus</u> <u>shufeldti</u> (Jordan and Evermann) <u>Gobiosoma</u> <u>boscii</u> (Lacépède)	Freshwater goby Naked goby
MONACANTHIDAE	<u>Stephanolepis</u> <u>hispidus</u> (Linnaeus)	Planehead filefish
MUGILIDAE	<u>Mugil</u> <u>cephalus</u> Linnaeus <u>Mugil</u> <u>curema</u> Valenciennes	Striped mullet White mullet
OPHIDIIDAE	<u>Rissola</u> <u>marginata</u> (DeKay)	Striped cusk-eel
POECILIIDAE	<u>Gambusia</u> <u>affinis</u> (Baird and Girard) <u>Heterandria</u> <u>formosa</u> Agassiz <u>Poecilia</u> <u>latipinna</u> (LeSueur)	Mosquitofish Least killifish Sailfin molly
POMACENTRIDAE	<u>Abudefduf</u> <u>saxatilis</u> (Linnaeus)	Sergeant major
POMADASYIDAE	<u>Orthopristis</u> <u>chrysopterus</u> (Linnaeus)	Pigfish
POMATOMIDAE	<u>Pomatomus</u> <u>saltatrix</u> (Linnaeus)	Bluefish

Table 3.--List of scientific and common names of fishes--Continued

<u>Family</u>	<u>Species</u>	<u>Common name</u>
SCIENIDAE	<u>Bairdiella chrysura</u> (Lacépède) <u>Cynoscion nebulosus</u> (Cuvier) <u>Cynoscion regalis</u> (Bloch and Schneider) <u>Larimus fasciatus</u> Holbrook <u>Leiostomus xanthurus</u> Lacépède <u>Menticirrhus americanus</u> (Linnaeus) <u>Menticirrhus littoralis</u> (Holbrook) <u>Menticirrhus saxatilis</u> (Bloch and Schneider) <u>Micropogon undulatus</u> (Linnaeus) <u>Pogonias cromis</u> (Linnaeus) <u>Sciaenops ocellatus</u> (Linnaeus) <u>Stellifer lanceolatus</u> (Holbrook)	Silver perch; yellowtail Spotted seatrout Weakfish; gray seatrout Banded drum Spot Southern kingfish Gulf kingfish Northern kingfish Atlantic croaker Black drum Red drum; channel bass Star drum
SCOMBRIDAE	<u>Scomberomorus maculatus</u> (Mitchill)	Spanish mackerel
SOLEIDAE	<u>Trinectes maculatus</u> (Bloch and Schneider)	Hogchoker
SPARIDAE	<u>Archosargus probatocephalus</u> (Walbaum) <u>Lagodon rhomboides</u> (Linnaeus)	Sheepshead Pinfish
STROMATEIDAE	<u>Peprilus alepidotus</u> (Linnaeus)	Southern harvestfish
SYNGNATHIDAE	<u>Syngnathus fuscus</u> Storer <u>Syngnathus louisianae</u> Günther	Northern pipefish Chain pipefish
SYNODONTIDAE	<u>Synodus foetens</u> (Linnaeus)	Inshore lizardfish
TETRAODONTIDAE	<u>Sphaeroides maculatus</u> (Bloch and Schneider)	Northern puffer
TRIGLIDAE	<u>Prionotus carolinus</u> (Linnaeus) <u>Prionotus scitulus</u> Jordan and Gilbert <u>Prionotus tribulus</u> Cuvier	Northern searobin Leopard searobin Bighead searobin
URANOSCOPIDAE	<u>Astroscopus y-graecum</u> (Cuvier)	Southern stargazer

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